## UNITED STATES DISTRICT COURT EASTERN DISTRICT OF NORTH CAROLINA WESTERN DIVISION

JAMES S. DEW, et al.,

Plaintiffs,

v.

Case No. 5:18-cv-0073-D

E.I. DU PONT DE NEMOURS AND COMPANY, et al.,

Defendants.

JAMES O'BRIEN, et al.

Plaintiffs,

v.

E.I. DU PONT DE NEMOURS AND COMPANY, et al.

Case No. 5:20-CV-00208-D

## PLAINTIFFS' STATEMENT OF MATERIAL FACTS

Pursuant to Local Rule 56(a)(1), Plaintiffs John Stevens, Annie Stevens, Allison Pini, Cynthia Faircloth, Richard Davis, Patsy Davis, Sandra Riggins-Branch, Paul Abril, and Socorra Abril (collectively, "Plaintiffs") submit the following statement of material facts as to which there is no genuine dispute.

1. Paul and Socorra Abril currently own and live at 4216 Marshwood Lake Road, Fayetteville, North Carolina. The Abrils bought the property in 2006, had their home constructed, and have lived at the property since 2007. Plaintiffs' Appendix to Local Civil Rule 56.1 Statement of Material Facts ("Appendix") ¶ 1 & 2.

- 2. On September 6, 2017, Defendant Chemours collected a water sample from the well serving the Abrils' house; the water sample contained GenX at a level of 300 ng/L. Appendix ¶ 3 at Response 1 & 2. A subsequent sample taken on March 9, 2018 by Defendant Chemours contained GenX at a level of 284 ng/L. Id. at Response 3.
- 3. Nine different PFAS from Fayetteville Works were detected in the Abrils' water in March 2023. Appendix ¶ 4 at page 43 of pdf. Total PFAS concentrations exceeded 2700 ng/L. *Id*. A cold-water sample contained the following: GenX at 328 ng/L; PEPA at 149 ng/L; PFO2HxA at 125 ng/L; PFMOAA at 59.2 ng/L; PMPA at 555 ng/L; NVHOS at 3.15 ng/L; Nafion Byproduct 2 at 4.49 ng/L; PFO3OA at 2.78 ng/L; and PPF Acid at 1500 ng/L. *Id*.
- 4. Fayetteville Works PFAS have also been detected in soil and hot water heater sediment at the Abrils' property. Appendix ¶ 4 at 51 (hot water heater sediment) and 73 (soil).
- 5. Dr. David Genereux, Ph.D. opines that Fayetteville Works PFAS currently in the Abrils' well water will remain for decades and could remain for up to 120 years. Appendix ¶ 5 at pages 4 and 10. Dr. Genereux explains that this calculation is conservative and does not account for PFAS that continue to enter Abrils' well water. *Id.* at 4 and 9.
- 6. Richard and Pat Davis own and live at 7242 Fire Department Road, Hope Mills, North Carolina. Appendix ¶ 6 & 7. Mr. and Mrs. Davis bought two acres of the property in 1991, bought the remaining two acres later, built their home in 2005, and have lived at the property since then. Id.
- 7. North Carolina Department of Environmental Quality sampled water serving the Davis's home twice in 2019 (May and August), finding GenX at 124 ng/L in May 2019 and 81.1 ng/L in August 2019. Appendix ¶ 8.

- 8. Ten different PFAS from Fayetteville Works were detected in the Davis's water in March 2023. Total PFAS concentration in the sample taken from the Davis's well exceeded 4600 ng/L, and GenX was detected at 156 ng/L. Appendix ¶ 4 at page 46 of pdf.
- 9. Fayetteville Works PFAS have been detected in soil and hot water heater sediment at the Davis's' property. Appendix ¶ 4 at 53 (hot water heater sediment) and 74 (soil).
- 10. Dr. David Genereux, Ph.D. opines that Fayetteville Works PFAS currently in the Davis's well water will remain for years and could remain for over thirty years. Appendix ¶ 5 at pages 4 and 10. Dr. Genereux explains that this calculation is conservative and does not account for PFAS that continue to enter Davis's well water. *Id.* at 4 and 9.
- 11. Cynthia Faircloth owns and lives at 3884 Tranquility Road, Fayetteville, North Carolina. Ms. Faircloth bought the property in 2007 (Appendix ¶ 9), currently owns the property (Appendix ¶ 10), and has lived at the property since 2007 (Appendix ¶ 11 at page 3).
- 12. Chemours sampled water serving Ms. Faircloth's home on September 13, 2017 and detected GenX at 45 ng/L. Appendix ¶ 12 at Responses to Requests 1 & 2.
- 13. Nine different PFAS from Fayetteville Works were detected in the Ms. Faircloth's water in March 2023. Appendix ¶ 4 at page 47 of pdf. Total PFAS concentration in the sample taken from Ms. Faircloth's well exceeded 475 ng/L, and GenX was detected at 76.3 ng/L. Id.
- 14. Fayetteville Works PFAS have also been detected in soil, hot water heater sediment, and in a creek at Ms. Faircloth's property. Appendix ¶ 4 at 47 (creek), 54 (hot water heater sediment) and 75 (soil).
- 15. Dr. David Genereux, Ph.D. opines that Fayetteville Works PFAS currently in Ms. Faircloth's well water will remain for decades and could remain for over 100 years. Appendix ¶ 5

at pages 4 and 10. Dr. Genereux explains that this calculation is conservative and does not account for PFAS that continue to enter Ms. Faircloth's well water. *Id.* at 4 and 9.

- 16. Ms. Pini owns and lives at 405 Jax Court, Fayetteville, North Carolina. Ms. Pini purchased the property in 2020 and has lived at the property with her family since then. Appendix ¶ 13 (deed), Appendix ¶ 14 (deposition at pages 17 and 24).
- 17. Defendant Chemours sampled water serving Ms. Pini's home on February 4, 2021 and detected PMPA at a level of 19 ng/L and PFMOAA at a level of 3 ng/L. Appendix ¶ 15 at Response to Request No. 2.
- 18. Testing performed in 2023 demonstrates that the water serving Ms. Pini's home is still contaminated; seven different PFAS from Fayetteville Works were detected. Appendix ¶ 4 at 48. Fayetteville Works PFAS have also been detected in soil at Ms. Pini's property. *Id.* at 76.
- 19. Dr. Genereux opines that Fayetteville Works PFAS currently in Ms. Pini's well water will remain for years and could remain for over thirty years. Appendix ¶ 5 at pages 4 and 10. He explains that this calculation is conservative and does not account for PFAS that continue to enter Ms. Pini's well water. *Id.* at 4 and 9.
- 20. Sandra Riggins-Branch owns two contiguous properties: 21 West Shaw Mill Road and 37 West Shaw Mill Road. Ms. Branch has owned and lived at 37 West Shaw Mill Road since 1998 and has owned and leased 21 West Shaw Mill Road since 2007. See Appendix ¶ 16 at 27, 28, 29, 30, 34, 37, 46, 63, 84, 85; Appendix ¶ 17 (37 West Shaw Mill deed); Appendix ¶ 18 (21 West Shaw Mill deed).
- 21. Defendant Chemours sampled water serving Ms. Riggins-Branch's house at 21 West Shaw Mill on July 31, 2019 and detected six PFAS with a combined PFAS concentration

greater than 170 ng/L. Appendix ¶ 19 at Response to Request 1 & 3. Chemours did not sample the well located at 37 West Shaw Mill. *Id.* at Response to Request 6.

- 22. More recent testing demonstrates that the water serving 21 West Shaw Mill Road and the well located on 37 West Shaw Mill Road are both still contaminated with Defendants' PFAS; ten PFAS were detected for 21 West Shaw Mill Road and five PFAS were detected for 37 West Shaw Mill Road. Appendix ¶ 4 at 44-45. Fayetteville Works PFAS have also been detected in hot water heater sediment at 21 West Shaw Mill Road. Id. at 52.
- 23. Dr. Genereux opines that Fayetteville Works PFAS currently in Ms. Riggins-Branch's well water will remain for years and could remain for over sixty years. Appendix ¶ 5 at pages 4 and 10. He explains that this calculation is conservative and does not account for PFAS that continue to enter Ms. Riggins-Branch's well water. *Id.* at 4 and 9.
- 24. John and Annie (Merle) Stevens own and live at 7619 Highway 87 South, Fayetteville, North Carolina. Mr. and Mrs. Stevens purchased the property in 1983 and have lived at the property since approximately 1985. Appendix ¶ 20 (original deed); Appendix ¶ 21 (current deed); Appendix ¶ 22 at 17.
- 25. On December 4, 2017, Defendant Chemours collected a water sample from the well serving the Stevens' house; the water sample contained GenX at a level of 120 ng/L. Appendix ¶ 23 at Response to Requests 3 & 4. A subsequent sample taken on March 14, 2018 contained GenX at a level of 163 ng/L. *Id.* at Response to Request 5.
- 26. More recent testing demonstrates that the water serving the Stevens' home is still contaminated; eleven different PFAS from Fayetteville Works were detected in the Stevens' water in March 2023. Appendix ¶ 4 at page 49 of pdf. Total PFAS concentration in the sample taken from the Stevens' well exceeded 4,000 ng/L, and GenX was detected at 423 ng/L. *Id*.

- 27. Fayetteville Works PFAS have also been detected in soil, hot water heater sediment, and produce at the Stevens' property. Appendix ¶ 4 at 56 (hot water heater sediment) and 77 (soil); Appendix ¶ 24 at 6-9 (soil and produce).
- 28. Dr. Genereux opines that Fayetteville Works PFAS currently in the Stevens' well water will remain for years and could remain for over 110 years. Appendix ¶ 5 at pages 4 and 10. He explains that this calculation is conservative and does not account for PFAS that continue to enter the Stevens' well water. Id. at 4 and 9.
- DuPont knew in 1980 that it was releasing HFPO dimer acid and other by-products from vinyl ethers north via air emissions at Fayetteville Works. Appendix ¶ 25 at 274:3-11. Defendants concede that PFAS were emitted both into the air and into the Cape Fear River since the facility began production. Appendix ¶ 49 at 107:14-108:16. Defendants have intentionally emitted PFAS as part of their operations since then. See Appendix ¶27 at pp 12-35, 49-61 of pdf. In 1994, DuPont acknowledged that it would release significant amounts of PFAS from its PEVE process unit. See Appendix ¶ 66 at 01328980, 01328990 ; Appendix ¶ 27 at 56 of pdf; Appendix ¶ 63 at 260 of pdf. The compound PEPA which has been found in all of Plaintiffs' wells is results from the PEVE process. See Appendix ¶ 27 at p 27 of pdf.
- 30. DuPont and Chemours, collectively, have owned and operated a chemical manufacturing facility located south of Fayetteville, North Carolina called Fayetteville Works, since the 1970s. DuPont owned and operated the facility from 1971 until 2015. [D.E. 55 at ¶ 12]; Appendix ¶ 48 at page 13 of pdf. In 2015, DuPont spun off Chemours, and since then Chemours has owned and operated the facility. [D.E. 54 at ¶¶ 4, 28]. Appendix ¶ 48 at page 13 of pdf.

- 31. In August 1979, DuPont began operations at its Nafion facility, which produces per- and polyfluorinated substances ("PFAS") at Fayetteville Works. Appendix ¶ 26 at Carey-CHEM-00328653; Appendix ¶ 27 at page 6-8 of report.
- 32. Millions of pounds of PFAS have been emitted from Fayetteville Works since it began producing PFAS in 1979. Appendix ¶ 27 at p. 43 of report. PFAS is emitted from Fayetteville Works through air discharge stacks, blowers, and vents. Appendix ¶28 at page 37 of pdf. Fugitive emissions account for additional emissions from Fayetteville Works. See ¶ 44 at 30:2-18; ¶ 32 at pp 7,9 of report.
- 33. Once aerially emitted from Fayetteville Works, Defendants' PFAS have deposited to offsite surface soils and have over time infiltrated to groundwater. Appendix ¶ 28 at 41 of pdf. "Where PFAS are present offsite at private wells, they originate from aerially deposited PFAS." *Id.* at p 78 of pdf. Fayetteville Works PFAS have also deposited on soil and surface water. Appendix ¶ 48 at page 13 of pdf ("The Site is an active manufacturing facility . . . which has had direct releases of [PFAS] to air, soil, groundwater and surface water.")
- 34. The United States Environmental Protection Agency ("EPA") has established a Drinking Water Lifetime Health Advisory for HFPO-DA ("GenX") of 10 ng/L. See Appendix ¶ 29 at pages 31& 45 of report; Appendix ¶ 30 at page 127 line 21-24; Appendix ¶ 29, pp 10 and 37 of pdf; Appendix ¶ 34 at Dew-CHEM-00482714.
- 35. EPA has proposed a National Primary Drinking Water Regulation to establish a legally enforceable level for public water systems, called Maximum Contaminant Level (MCL), for GenX. The MCL is developed using a hazard index approach and looks at whether any one of four PFAS are present; if only GenX is present, the MCL would be 10 ng/L. See Appendix ¶ 29 at pages 45-56 of report.

- 36. EPA has not published a drinking water lifetime health advisory level for any PFAS compound detected at Plaintiffs' properties other than HFPO-DA. See Appendix ¶ 4 pages 42-77 of pdf (for PFAS detected at Plaintiffs' properties); Appendix ¶ 29 at pages 40-56 (showing no health advisory for any PFAS detected at Plaintiffs property other than GenX);
- 37. Chemours has reduced the amount of PFAS emitted from Fayetteville Works, but PFAS emissions from Fayetteville Works have not been eliminated and therefore continue to this day. See Appendix ¶ 32 at pp 9-12 of report; ¶ 4 at pp 28-31 of report.
- 38. North Carolina Department of Environmental Quality, Division of Air Quality ("DAQ") has conducted sampling to assess deposition of GenX and other PFAS via air emissions from Fayetteville Works. See Appendix ¶ 32 at pp 9-12 of report; ¶ 4 at pp 28-31 of report. They assess dry and wet weather events. Id. Sampling has occurred from 2018 until at least August 2023. See id: also DAO see Weekly Reports at https://edocs.deq.nc.gov/WaterResources/Browse.aspx?id=1081406&dbid=0&repo=WaterResou rces&cr=1. As of February 9, 2024, The most recent testing event on DAQ's website is from samples representing the weeks of July 18, 2023-August 1, 2023; the results from that sampling show the presence of multiple PFAS, and at one location GenX was detected at 35.2 ng/L in a wet sample and at 28.3 ng/L in a dry sample. Appendix ¶ 33 at pp 3 (wet) and 7 (dry). This sample was taken at sampling location 2, which is located in a residential area to the northeast of Fayetteville Works. See Appendix ¶ 33 at pp 3 and 7 (see "02" in sampling ID) and Appendix ¶ 32 at p 12 of report (showing location of sampling stations). Multiple other PFAS were detected at levels greater than 10 ng/L, including PFMOAA, PFO2HxA, PFO3OA, and Nafion Byproduct 4 in the dry sample and PFMOAA and PFO2HxA in the wet sample. Appendix ¶ 33 at pp 3 and 7.

- 39. On multiple occasions in 2022 and 2023, DAQ has detected GenX in dry and wet deposition samples at levels greater than 10 ng/L. See Appendix ¶ 32 at pp 9-12 of report; ¶ 4 at pp 28-31 of report.
- 40. The following compounds have been found in the well water, soil, produce, surface water, or hot water heater sediment at the property of at least one of the Plaintiffs: HFPO-DA (GenX); Hydro-EVE Acid; PEPA; PFESA BP2 (Nafion Byproduct 2); PFMOAA; PFO2HxA; PFO3OA; PMPA; PPF; NVHOS; R-EVE; R-PSDA; Hydrolyzed PSDA; PFO4DA; and PFO5DA. Appendix ¶4 at pp 11, 42-77 of pdf; Appendix ¶8 (DEQ testing of Davis well); Appendix ¶ 35 at Dew-Faircloth\_C-000006 7; Appendix ¶ 36 at Dew-CHEM-00483041-42; Appendix ¶ 37 at Dew-CHEM-00483293-94.
- 41. Defendant tested certain of Plaintiffs' properties and detected the following compounds in the well water at each of the below-listed Plaintiffs' properties:
  - a. Faircloth | 3884 Tranquility Road, Fayetteville, North Carolina
    - i. Sample Collected 9.15.2017
      - 1. HFPO-DA (GenX): 45 ng/L
      - 2. PFMOAA: 5.3 ng/L
      - 3. PFO2HxA: 12 ng/L

Appendix ¶ 35 at Dew-Faircloth\_C-000006 -7.

- b. Sandra Riggins-Branch | 21 West Shaw Mill Road, St. Pauls, North Carolina
  - i. Sample Collected 7/31/2019
    - 1. HFPO-DA (GenX): 8.9 ng/L
    - 2. PEPA: 11 ng/L
    - 3. Nafion Byproduct 2: 11 ng/L

4. PFMOAA: 24 ng/L

5. PFO2HxA: 18 ng/L

6. PMPA: 100 ng/L

Appendix ¶ 36 at Dew-CHEM-00483041-42.

c. Allison Pini | 405 Jax Court, Fayetteville, North Carolina

i. Sample Collected 2/4/2021

1. PFMOAA: 3 ng/L

2. PMPA: 19 ng/L

Appendix ¶ 37 at Dew-CHEM-00483293-94.

42. North Carolina Department of Environmental Quality tested the well water of Pat and Richard Davis at 7242 Fire Department Road, Hope Mills, North Carolina in May and August of 2019. Appendix ¶ 8. DEQ detected a Total PFAS concentration of more than 500 ng/L, and DEQ detected the following PFAS at levels above 25 ng/L in May 2019: GenX (124 ng/L); Nafion Byproduct 2 (28.3 ng/L); PFO2HxA (61.3 ng/L); PFMOAA (73.8 ng/L); PFMPOrA/PMPA (158 ng/L); PFMOBA/PEPA (74.2 ng/L). *Id.* at DEW-DAVIS\_R&P-000100 through 101. DEQ detected the following PFAS at levels above 30 ng/L in August 2019: GenX (81.1 ng/L); Nafion Byproduct 2 (33.5 ng/L); PFO2HxA (54 ng/L); PFMOAA (56.9 ng/L); PFMPOrA/PMPA (155 ng/L); PFMOBA/PEPA (83.4 ng/L). *Id.* at DEW-DAVIS\_R&P-000060 through 63.

43. Four PFAS have been detected in the well water at all of Plaintiffs' properties: PEPA, PFMOAA, PMPA, and PPF. Appendix ¶4, pp 27, 43-49 of pdf. In addition, HFPO-DA (GenX) was detected in well water from six of the seven properties (all but Pini). *Id.* PFO2HxA was detected in well water from six of the seven properties (all but Branch 37 West Shaw Mill Road). *Id.* NVHOS was detected in the Abril, Branch (21 West Shaw Mill Road), Davis, Faircloth

and Pini well samples. *Id.* PFESA BP2, or Nafion Byproduct 2, was detected in the Branch (21 West Shaw Mill Road), Davis and Stevens well water samples. *Id.* PFO3OA was detected in the Branch (21 West Shaw Road) and Stevens well samples. *Id.* at 44, 49. R-Eve was detected in the Branch (21 West Shaw Road), Faircloth, and Stevens well samples. *Id.* at pp 44, 47, 49. R-PSDA was detected in the Faircloth and Stevens well samples. *Id.* at Hydro-Eve acid was pp 47, 49. present in the Stevens groundwater sample results. *Id.* at 49.

- 44. The following compounds or their precursors have been generated, produced, and/or manufactured at Fayetteville Works:
  - a. HFPO-DA (GenX) --- Appendix ¶ 40 at Response No. 1; ¶ 41 at Response No. 1;
    ¶ 4 at pp 13-15 of pdf; ¶ 27 at pp 7-19, 21-22 of report.
  - b. Hydro-EVE Acid -- Appendix ¶ 38 at Response No. 1; ¶ 39 at Response 1; ¶ 4 at pp 13-15 of pdf; ¶ 27 at pp 7-19, 21-22 of report;
  - c. PEPA -- Appendix ¶ 40 at Response No. 1; ¶ 41 at Response No. 1; ¶ 4 at pp 13-15 of pdf; ¶ 27 at pp 7-19, 21-22 of report;
  - d. PFESA BP2 (Nafion Byproduct 2) -- Appendix ¶ 40 at Response No. 1; ¶ 41 at Response No. 1; ¶ 4 at pp 13-15 of pdf; ¶ 27 at pp 7-19, 21-22 of report;
  - e. PFMOAA -- Appendix ¶ 40 at Response No. 1; ¶ 41 at Response No. 1; ¶ 4 at pp 13-15 of pdf; ¶ 27 at pp 7-19, 21-22 of report;
  - f. PFO2HxA -- Appendix ¶ 40 at Response No. 1; ¶ 41 at Response No. 1; ¶ 4 at pp 13-15 of pdf; ¶ 27 at pp 7-19, 21-22 of report;
  - g. PFO3OA -- Appendix ¶ 40 at Response No. 1; ¶ 41 at Response No. 1; ¶ 4 at pp 13-15 of pdf; ¶ 27 at pp 7-19, 21-22 of report;

- h. PFPrA / PPF Acid -- Appendix ¶ 38 at Response No. 1; ¶ 39 at Response 1; ¶ 4 at pp 13-15 of pdf; ¶ 27 at pp 7-19, 21-22 of report;
- i. PMPA -- Appendix ¶¶ 40 at Response No. 1; 41 at Response No. 1; ¶ 4 at pp 13-15 of pdf; ¶ 27 at pp 7-19, 21-22 of report;
- j. NVHOS -- Appendix ¶¶ 38 at Response No. 1; 39 at Response 1; ¶ 4 at pp 13-15 of pdf; ¶ 27 at pp 7-19, 21-22 of report;
- k. R-EVE -- Appendix ¶¶ 38 at Response No. 1; 39 at Response 1; ¶ 4 at pp 13-15 of pdf; ¶ 27 at pp 7-19, 21-22 of report;
- 1. R-PSDA -- Appendix ¶ 4 at pp 13-15 of pdf; ¶ 27 at pp 7-19, 21-22 of report;
- m. Hydrolyzed PSDA-- Appendix ¶ 4 at pp 13-15 of pdf; ¶ 27 at pp 7-19, 21-22 of report;
- n. PFO4DA -- Appendix ¶¶ 40 at Response No. 1; 41 at Response No. 1; ¶ 4 at pp 13-15 of pdf; ¶ 27 at pp 7-19, 21-22 of report;
- o. PFO5DA -- Appendix ¶¶ 40 at Response No. 1; 41 at Response No. 1; ¶ 4 at pp 13-15 of pdf; ¶ 27 at pp 7-19, 21-22 of report.
- 45. The following compounds have been emitted/released into the air at Fayetteville Works and have come to rest outside the Fayetteville Works facility in Bladen and Cumberland County:
  - a. HFPO-DA (GenX) --- Appendix ¶¶ 40 at Response No. 5; 41 at Response No. 5;
    ¶ 4 at pp 13-19 of pdf; ¶ 27 at pp 7-26 of report; ¶ 28 at page 41-42 of pdf
  - b. Hydro-EVE Acid -- Appendix ¶ 4 at pp 13-19 of pdf; ¶ 27 at pp 7-26 of report.
  - c. PEPA -- Appendix ¶¶ 40 at Response No. 5; 41 at Response No. 5; ¶ 4 at pp 13-19 of pdf; ¶ 27 at pp 7-26 of report; ¶ 28 at page 41-42 of pdf

- d. PFESA BP2 (Nafion Byproduct 2) -- Appendix ¶¶ 40 at Response No. 5; 41 at Response No. 5; ¶ 4 at pp 13-19 of pdf; ¶ 27 at pp 7-26 of report;
- e. PFMOAA -- Appendix ¶¶ 40 at Response No. 5; 41 at Response No. 5; ¶ 4 at pp 13-19 of pdf; ¶ 27 at pp 7-26 of report; ¶ 28 at page 41-42 of pdf
- f. PFO2HxA -- Appendix ¶¶ 40 at Response No. 5; 41 at Response No. 5; ¶ 4 at pp 13-19 of pdf; ¶ 27 at pp 7-26 of report;
- g. PFO3OA -- Appendix ¶¶ 40 at Response No. 5; 41 at Response No. 5; ¶ 4 at pp 13-19 of pdf; ¶ 27 at pp 7-26 of report;
- h. PFPrA / PPF Acid -- Appendix ¶ 4 at pp 13-19 of pdf; ¶ 27 at pp 7-26 of report.
- i. PMPA -- Appendix ¶¶ 40 at Response No. 5; 41 at Response No. 5; ¶ 4 at pp 13-19 of pdf; ¶ 27 at pp 7-26 of report; ¶ 28 at page 41-42 of pdf
- j. NVHOS -- Appendix ¶ 4 at pp 13-19 of pdf; ¶ 27 at pp 7-26 of report.
- k. R-EVE -- Appendix ¶ 4 at pp 13-19 of pdf; ¶ 27 at pp 7-26 of report.
- 1. R-PSDA -- Appendix ¶ 4 at pp 13-19 of pdf; ¶ 27 at pp 7-26 of report.
- m. Hydrolyzed PSDA -- Appendix ¶ 4 at pp 13-19 of pdf; ¶ 27 at pp 7-26 of report.
- n. PFO4DA -- Appendix ¶¶ 40 at Response No. 5; 41 at Response No. 5; ¶ 4 at pp 13-19 of pdf; ¶ 27 at pp 7-26 of report;
- o. PFO5DA -- Appendix ¶¶ 40 at Response No. 5; 41 at Response No. 5; ¶ 4 at pp 13-19 of pdf; ¶ 27 at pp 7-26 of report;
- 46. Plaintiff Sandra Riggins-Branch's property is located in Bladen County. Appendix ¶ 4 at p 60 of pdf. The remaining of Plaintiffs' properties at issue here are located in Cumberland County. *Id.* at 59, 61, 62, 63, and 64 of pdf.

- A7. In a document prepared for Chemours titled "Corrective Action Plan," dated December 2019, Geosyntec, Chemours' consultants, discussed an "aerially deposited PFAS signature" as to offsite private groundwater wells where PMPA is commonly the highest concentration and other Table 3+ PFAS specifically, GenX, PFO2HxA, PEPA, and PFMOAA) are also detected in a substantial proportion of the samples. Appendix ¶ 28 at pp 41-42 of pdf; Appendix ¶ 47 at slide 7; Appendix ¶ 48 at Carey-CHEM-00199916-18. PEPA, PFO2HxA, and PMPA have been detected in the well water of all Plaintiffs; GenX has been detected in the well water of all but one of Plaintiffs' properties. Appendix ¶4, pp 27, 43-49 of pdf. In its On and Offsite Assessment, Chemours' consultants concede "[h]istorical air emissions have resulted in off-site well PFAS impacts, in the primary wind direction, over six miles from the site." Appendix ¶ 48 at page 17 of pdf.
- 48. "The PFAS that originate from the [Fayetteville Works facility] are referred to as Table 3+ PFAS. The Table 3+ analytical method was developed to analyze PFAS specific to the [Fayetteville Works facility] that were identified through non-targeted chemical analysis." Appendix ¶ 28 at page 12 of pdf. The Table 3+ PFAS include: MMF, DFSA, MTP, PPF, PFMOAA, NVHOS, R-EVE, PMPA, Nafion Byproduct 4, Nafion Byproduct 5, PFO2HxA, PEPA, PES, PFECA B, PFO3OA, HFPO-DA (GenX), Nafion Byproduct 6, PFECA-G, PFO4DA, Nafion Byproduct 1, EVE Acid, PFO5DA. *Id.* at pp 34-35 of pdf; see Appendix ¶ 48 at 13 of pdf ("The PFAS present at the Site are Table 3+ PFAS, presently a set of 20 PFAS which at the Site originate from a release from the manufacturing process.")
- 49. Fayetteville Works is the sole source of the following PFAS compounds that have been detected at Plaintiffs' properties, including in well water and soil: HFPO-DA (GenX); Hydro-EVE Acid; PEPA; PFESA BP2 (Nafion Byproduct 2); PFMOAA; PFO2HxA; PFO3OA; PFPrA /

PPF Acid; PMPA; NVHOS; R-EVE; R-PSDA; Hydrolyzed PSDA; PFO4DA; and PFO5DA. Appendix ¶ 4 at pp 9-15 of pdf; ¶ 27 at pp 25-30; ¶ 30 at p. 124, lines 13-19 (for PPF Acid).

- 50. Defendants' corporate representative Sathya Yalvigi testified that Defendants know of no other source than Fayetteville Works for the following PFAS in Plaintiffs' water supply wells: GenX (167:2-5), PEPA, (167:6-9); Hydro-Eve Acid (172:25-173:3), Nafion Byproduct 2 (176:11-14), PFMOAA (170:5-8), PFO2HxA (170:1-4), PFO3OA (177:2-5), PMPA (170:9-12), PPF (177:14-17), NVHOS (175:7-10), R-EVE (177:18-21), and R-PSDA (177:22-25). Appendix ¶ 43 at the pages and lines indicate in the preceding sentence.
- 51. None of Defendants' experts including those discussing PFAS emissions or fate and transport issues –provided evidence of an alternative source for PFAS in Plaintiffs' wells. See Appendix ¶ 32, generally; Appendix ¶ 42 (Travers discussing alternative sources of PFAS in Cape Fear River but not in Plaintiffs' wells); Appendix ¶ 44 at 36:20-37:18 (Travers stating he has no opinion on the source of PFAS in Plaintiffs' wells); Appendix ¶ 45 at 25:4-6 (not aware of another GenX source) and 143:19-147:6 (not aware of alternative source for other PFAS found in Plaintiffs' wells).
- 52. Defendants have withdrawn affirmative defenses 11, 17, and 43, which relate to liability of third parties [D.E. 54 at 50-51,56] [O.D.E. 18 at 49-50, 55]. ¶ Appendix 46
  - 53. Below is a chart providing a partial list of PFAS generated at Fayetteville Works.

Acronym	Chemical Name	CAS#	Formula
HFPO-DA	Hexafluoropropylene oxide dimer acid	13252-13-6	C6HF11O3
PEPA	Perfluoro-2-ethoxypropanoic acid	267239-61-2	C5HF9O3
PFMOAA	Perfluoro-2-methoxyacetic acid	674-13-5	C3HF5O3
PFO2HxA	Perfluoro(3,5-dioxahexanoic) acid	39492-88-1	C4HF7O4
PMPA	Perfluoro-2-methoxypropanoic acid	13140-29-9	C4HF7O3
PPF Acid	Perfluoropropionic acid	422-64-0	C3HF5O2
PFMOPrA	Perfluoro 3-methoxypropanoic acid	377-73-1	C4HF7O3
PFMOBA	Perfluoro 3-methoxypropanoic acid	863090-89-5	C5HF9O3
PFECA B	Perfluoro-3,6-dioxaheptanoic acid	151772-58-6	C5HF9O4
PFO3OA	Perfluoro(3,5,7-trioxaoctanoic) acid	39492-89-2	C5HF9O5
PFO4DA	Perfluoro(3,5,7,9-tetraoxadecanoic) acid	39492-90-5	C6HF11O6
PFO5DA	Perfluoro-3,5,7,9,11- pentaoxadodecanoic acid	39492-91-6	C7HF13O7
Hydro-EVE Acid	Perfluoroethoxypropanoic acid	773804-62-9	C8H2F14O4
EVE Acid	Perfluoroethoxypropionic acid	69087-46-3	C8HF13O4
R-EVE	R-EVE	EVS1428	C8H2F12O5
PES	Perfluoroethoxyethanesulfonic acid	113507-82-7	C4HF9O4S
NVHOS	Perfluoroethoxysulfonic acid	1132933-86-8	C4H2F8O4S
PFESA-BP1	Nafion byproduct 1	29311-67-9 66796-30-3	C7HF13O5S
MMF	Difluoromalonic acid	1514-85-8	C3H2F2O4
MTP	Perfluoro-2-methoxypropanoic acid	93449-21-9	C4H4F4O3
PFESA-BP2	Nafion byproduct 2	749836-20-2	C7H2F14O5S

Appendix  $\P$  4 at page 13 of pdf;  $\P$  27 at 27-28 of pdf.

54. Defendants knew from the time operations began at Fayetteville Works that, as a scientific principle, air emissions from a facility could deposit to the ground and cause contamination, including groundwater contamination. See Appendix ¶ 50 at Carey-CHEM-00588543 (discussing PFAS emissions at Vinyl Ethers North, "Any material with a boiling point higher than ambient, I assumed that it would come back down to ground from the air and get into the soil at some point."); Appendix ¶ 51 at 73:24-74:13 ("Q: Have you ever become aware of any

particular reason why Du Pont started sampling for C-8 in drinking water in the eighties? A: My recollection about the first sampling of that type is – our concern was aerial deposition. . . . And when you start talking about aerial exposure, you also talk about aerial deposition on the ground and in the water. Again, it would be a prudent thing to analyze water sources for that reason.").

- Washington Works where air emissions led to PFAS contamination of drinking water wells. DuPont began testing drinking water from public water providers potentially affected by their facility in 1984 and found PFAS contamination. See Appendix ¶ 52 at AFFF-MDL-EID-00166739 ("Some information which we just developed 5/21/1984 is that detectible levels of C-8 are in both the Lubeck, W.V. and the Little Hocking, Ohio water systems."); Appendix ¶ 58. In 1987, with respect to Lubeck Water District, an assignment was made to determine the "[m]ode of Contamination." Appendix ¶ 53 at Carey-EID-00150071. It is unclear from the documentary record what was done to make such a determination, if anything, at that time, but by 2002 it was considered and confirmed by 2003 to have been caused in part from air emissions from the Washington Works facility. Appendix ¶ 54 at Carey-EID-00154714; Appendix ¶ 55 at 38:22-42:3.
- 56. In 2005-2006, DuPont investigated the potential for a PFAS called PFOA to contaminate private wells located near Fayetteville Works. See Appendix ¶ 56 (1/19/2006 letter from DuPont to EPA re PFOA sampling results for private wells located near Fayetteville Works, with analytical report cover page from November 2005); Appendix ¶61. In 2007, DuPont modeled deposition of C8 air emissions at Fayetteville Works. Appendix ¶ 57. There is no evidence suggesting DuPont developed models or tested private wells for any of the PFAS at issue here during the 2005-2007 timeframe.

- 57. Defendants knew since the 1980s based on experience at Washington Works that PFAS emission from their manufacturing process could pose a risk to local communities. See Appendix ¶ 59 at AFFF-MDL-EID-00156487 ("There is obviously great potential for current or future exposure of members of the local community from emissions leaving the Plant perimeter."); Appendix 60 at Carey-EID-01312455 ("Concern was expressed about air emissions of C-8, . . . . It was agreed that engineering analyses would proceed expeditiously on two alternatives . . . for eliminating air emissions.").
- 58. Defendants knew that residents like Plaintiffs relied on private water wells located near the Fayetteville Works facility. See Appendix ¶ 56 (2005 testing of private wells near Fayetteville Works); Appendix ¶ 61 (discussing neighboring well and lake).
- 59. Although Defendants failed to conduct chronic toxicity studies for all of the compounds located in Plaintiffs' wells except for GenX, Defendants have long known that PFAS including those produced at Fayetteville Works may pose a risk to human health. See, generally, Appendix ¶ 63. As early as 1970, DuPont conducted studies indicating C-8 a type of PFAS also called PFOA "is highly toxic when inhaled and moderately toxic when injected," but acknowledged that chronic data was not available. Appendix ¶ 62 at Carey-EID-00203402. Given its toxicity, in 1975, internally, DuPont was recognizing the potential concern of contamination of drinking water wells. Appendix ¶ 68 at Carey-EID-00150196 ("The problems with disposing of Teflon® wastes are fear of toxicity, either from the Teflon® itself or additives in some products. Although the fears of contamination of underground water supplies by Teflon® scrap may be exaggerated, the possibility of small amounts of undesirable materials such as triton and C-8 being present does exist."). By the late 1970s, DuPont became aware that PFAS was being found in the blood of the general population and in the blood of 3M employees. See Appendix ¶ 69 (1976 Karrh

of DuPont sending to Ubel of 3M list of references on blood fluoride levels in man); Appendix ¶ 70 (1978 DuPont receives Guy and Taves paper discussing PFAS in blood of general population); Appendix ¶ 60 at Carey-EID-01312457 (1978 DuPont learns PFOA in blood of 3M employees); Appendix ¶ 71 at AFFF-MDL-EID-00297689 (1979 DuPont learns PFAS was accumulating in the blood of their Washington Works employees). Notably it was in this exact timeframe that DuPont began manufacturing and releasing PFAS chemicals into the air at Fayetteville Works. In 1981, DuPont was informed by 3M of embryotoxic effects caused by PFAS chemicals, and DuPont became concerned about potential risks to employees. Appendix ¶ 72. DuPont began a program to attempt to reduce personnel exposure to C-8. Appendix ¶ 71.

- 60. As to GenX and other PFAS at Fayetteville Works, DuPont conducted a study in 1962, with a report dated January 3, 1963, which demonstrated some toxicity; the researchers noted that additional research should be conducted if people would be chronically exposed: "If this compound develops usefulness . . . and there is a possibility of customer exposure, further toxicity studies should be considered, particularly repeated exposures." Appendix ¶64 at 709378. In 1982, DuPont had information that HFPO another PFAS at Fayetteville Works targeted the kidneys. ¶63 at p. 247 of pdf; ¶67 at p 4 of pdf. In 2007, DuPont noted GenX caused chromosomal aberrations, but it still had not conducted a chronic toxicity study. See Appendix ¶65 at Carey-Chem-00279636; Appendix ¶63 at p 291-93 of pdf. And once it did conduct a toxicity study in 2011 for GenX, DuPont confirmed that chronic exposure could result in toxic effects Appendix ¶63 at p 301 of pdf.
- 61. Since 2017, Defendants have known that private wells around the Fayetteville Works facility are contaminated with Fayetteville Works PFAS, including GenX. See Appendix ¶ 43 at 80:12-16; Appendix ¶ 3 at Response 1 & 2.

- 62. Plaintiffs did not authorize Defendants' PFAS to enter their property, and Plaintiffs do not consent to the continued presence of PFAS at their property. Appendix ¶ 74 (declarations from Plaintiffs)
- 63. Defendants did not warn Allison Pini that her property was at risk of contamination from the release of PFAS from the Fayetteville Works Facility prior to 2021. Appendix ¶ 15 at Response No. 7; ¶ 75 at response to no. 3. Defendants did not warn Cynthia Faircloth, John & Annie Stevens, and Paul & Socorra Abril that their properties were at risk of contamination from the release of PFAS from the Fayetteville Works Facility prior to 2017. Appendix ¶¶ 12 at Response No. 9 and ¶ 73 at Response No. 4 (Faircloth); ¶ 23 at Request No. 12 and ¶ 76 at Request No. 4 (Stevens); ¶ 3 at Response No. 10 and ¶ 77 at Response No. 4 (Abril). Defendants did not warn Sandra Riggins-Branch and Richard & Pat Davis that their properties were at risk of contamination from the release of PFAS from the Fayetteville Works Facility prior to 2019. Appendix ¶¶19 at Response No. 9 and ¶ 78 at Response No. 3 (Branch); ¶ 79 at Response No. 10 and ¶ 80 at Response No. 12 (Davis).
- 64. All Plaintiffs have suffered diminution of property value due to Defendants.

  Appendix ¶ 81 (Domanski Expert Report) at 5.
- 65. All Plaintiffs' wells are contaminated and require treatment prior to use. See Appendix ¶ 29. Chemours' filtration offer comes with terms that Plaintiffs do not wish to accept. It would cost Plaintiffs considerably to treat their contaminated water. See Appendix ¶ 82 (LaRosa Expert Report).
- 66. Cynthia Faircloth has suffered considerable harm as a result of PFAS contamination at her property. Her well water is contaminated and requires treatment. In addition, a non-exhaustive list includes loss of ability to garden; stress and concern when bathing; fear of health

effects resulting from past and ongoing exposure to family, pets, and herself; Plaintiff and her family no longer harvest meat or eat fish from the property; Plaintiff's grandkids no longer can play in the creek on the property, which causes Plaintiff sadness; Plaintiff is concerned about her property losing value; drinking, storing, moving, and disposing of bottled water is burdensome; and the need for water treatment. Appendix ¶ 83 at Answer to Interrogatory 10.

- 67. Allison Pini has suffered considerable harm as a result of PFAS contamination at her property. Her well water is contaminated and requires treatment. In addition, a non-exhaustive list of harms includes loss of ability to garden; stress due to potential health effects of her family having to use the water – she has multiple young children; due to the presence of an RO treatment system under her sink, she has significantly less storage space; the RO treatment regularly breaks down; Plaintiffs' smart refrigerator has a water dispenser that she cannot use to do water being contaminated; Plaintiffs' family uses their pool less frequently due to PFAS contamination; drinking, storing, moving, and disposing of bottled water is burdensome; Plaintiff has had to buy bottled water due to the RO system frequently not working; and the need for water treatment. Appendix ¶ 84 at Answer to Interrogatory 7 & 10.
- Sandra Riggins Branch has suffered harm as a result of PFAS contamination at her 68. property. Her well water is contaminated and requires treatment. In addition, a non-exhaustive list of harms includes concern about the health of her tenants, family, and herself (based on past exposure); costs, stress, and annoyance incurred when coordinating installation of RO filtration system – Chemours required that Plaintiff perform considerable maintenance and repairs prior to installing a filtration system; stress about future rental values not going up as they should; concern that she is not safe to use the wells for non-domestic uses, like gardening or washing cars; and

plaintiff would like to garden in the future, but now she will not because of the contamination. Appendix ¶ 85 at Answer to Interrogatory 7 & 10.

- 69. John and Annie Merle Stevens have suffered considerable harm as a result of PFAS contamination at their property. Their well water is contaminated and requires treatment. In addition, a non-exhaustive list of harms includes concerns about their health and the health of their families due to PFAS exposure when at their property; loss of ability to grow, eat, and sell produce, leading to loss of enjoyment and income; concern about exposure during showers causing Plaintiffs' to take shorter showers; Plaintiffs must use bottled water for any ice used at the property; Plaintiffs' family do not visit as much as they did before learning of PFAS contamination because some family members are concerned about PFAS exposure; it has been extremely burdensome for Plaintiffs to use, transport, store, and dispose of bottled water. Appendix ¶ 86 at Answer to Interrogatory 7 & 10.
- 70. Paul & Socorra Abril have suffered considerable harm as a result of PFAS contamination at their property. Their well water is contaminated and requires treatment. In addition, a non-exhaustive list of harms includes concerns about their health due to PFAS exposure; no longer growing produce to eat on the property due to PFAS contamination; Plaintiffs bought and used an above ground pool, but they stopped using it and tore it down due to PFAS contamination; Plaintiffs would like to have new pets but do not want to bring a pet onto the property due to PFAS exposure; Plaintiffs must make ice using bottled water; it has been extremely burdensome for Plaintiffs to use, transport, store, and dispose of bottled water; family does not visit as much anymore due to PFAS exposure; and Plaintiffs cannot use the lake that borders their property because the lake is contaminated. Appendix ¶ 87 at Answer to Interrogatory 7 & 10.

71. Pat & Richard Davis have suffered considerable harm as a result of PFAS

contamination at her property. Their well water is contaminated and requires treatment. In

addition, a non-exhaustive list of harms includes concerns about their health due to PFAS

exposure; no longer growing produce to eat on the property due to PFAS contamination; no longer

taking bubble baths due to fear of PFAS exposure; social embarrassment when having to discuss

that their home's water is contaminated; family does not visit as much as they otherwise would;

Plaintiffs cannot use their ice maker; it has been extremely burdensome for Plaintiffs to use,

transport, store, and dispose of bottled water; and Plaintiffs have incurred costs to buy bottled

water. Appendix ¶ 88 at Answer to Interrogatory 7 & 10.

72. Defendants' air emissions have caused extensive contamination. PFAS emitted

from Fayetteville Works has been detected in thousands of private wells, some located over twenty

miles from the facility. Appendix ¶ 89.

73. In their discovery responses, Defendants failed to identify any evidence of contributory

negligence on the part of the Plaintiffs. Appendix ¶ 98 at Request No. 6 (Stevens);

Appendix ¶ 99 at Response No. 6 (Pini); Appendix ¶ 100 at Response No. 6 (Faircloth);

Appendix ¶ 101 at Response No. 6 (Davis); Appendix ¶ 102 at Response No. 6 (Branch);

Appendix ¶103 at Response No. 6 (Abril).

DATED: February 12, 2024

Respectfully submitted,

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## **CERTIFICATE OF SERVICE**

I hereby certify that I have electronically filed the foregoing with the Clerk of the Court using the CM/ECF system, which will send notification of such filing to all counsel of record.

Dated: February 12, 2024

/s/ Brett Land Brett Land